



University of Utah

A Model in Energy Performance Contracting 1998-2002

In 1998 the University of Utah was faced with aging buildings, outdated energy-using equipment, rising utility bills, and limited heating and cooling capacities for upper campus. With little likelihood of legislative funding, the University's of Utah undertook a creative public-private partnership with an energy service company. The private company was procured to engineer, install, and finance energy improvements campus wide with the University paying for those improvements over time from energy cost savings.

Size of Project: 81 buildings – 5.35 million square feet

Project Cost: \$10.7 million (Phases I&II – retrofit of existing buildings)
 9.6 million (Phase III – new chilled water plant)
 19.2 million (Phases IV&V – retrofit of existing buildings & high temp. hot water plant)

Energy Conservation Measures Implemented:

- Energy efficient lighting – modifications and upgrades to 67,978 fixtures
- 3 new centrifugal chillers
- 2 new cooling towers
- Upgrades to energy management control system – 4450 points
- 82 variable frequency drives (VFDs) for heating and cooling systems
- Variable speed chilled water pumping
- 95 energy efficient motors
- Convert constant volume systems to variable air volume
- 602 low water toilets and urinals with 1441 low flow aerators for sinks
- Upgrades to 281 radiator valves
- Energy improvements to 410 fume hoods
- Other upgrades: 6800 ton capacity chilled water plant and 210 mmbtu capacity HTW plant

Energy Savings (9/30/00 to 8/31/02): 22 % estimated minimum energy cost savings

- Electrical savings: 50,246,738 KWH
- Natural gas savings: 976,190 therms
- Water savings: 11,675,700 cubic feet
- Actual energy cost savings: \$2,657,682 (to 6/30/02)

Savings allocation by retrofit class: Controls (58%), mechanical (20%), lighting (18%), water (2%), and motors (1%)

Environmental Benefits: to be calculated

Partners: University of Utah Campus Planning, Viron Energy Services, Division of Facilities Construction and Management, and the Utah Energy Office

Project Awards: 1999 Energy Star Honor Society – EPA, 2001 Energy Champion – Association of Professional Energy Managers, Rebuild America Energy Excellence Award – U.S. Dept. of Energy, and 2001 WWF

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